



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 5th Semester Examination, 2022-23

ZOOACOR11T-ZOOLOGY (CC11)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.*

1. Answer any **eight** questions from the following: 2×8 = 16
- What are purines and pyrimidines?
 - Write down the differences between DNA and RNA.
 - What is TATA Box?
 - What is cDNA?
 - Explain the following statement — “the genetic code is degenerate”.
 - What are Okazaki fragments?
 - Define sense and antisense strands of DNA in view of transcription.
 - What is the function of topoisomerase enzyme?
 - What is nonsense codon?
 - Distinguish between Southern blot and Western blot techniques.
 - Which enzyme is used in PCR technique and why?
 - Write the names of two inhibitors of protein synthesis.
2. Answer any **three** questions from the following: 3×3 = 9
- Distinguish between Z, B and A DNA.
 - What is the function of t-RNA and r-RNA?
 - Distinguish between inducible and repressible system.
 - Write the differences between prokaryotic and eukaryotic translation.
 - What do you mean by splicing?
 - Describe the process of amino acid activation during translation.
3. Answer any **three** questions from the following: 5×3 = 15
- Prove that DNA replication is a semiconservative.
 - What do you mean by a codon? Discuss some important properties of a genetic code. 2+3
 - Describe the structure and function of E coli RNA polymerase.
 - Discuss in brief about the miRNA mediated gene silencing.
 - Describe regulation of transcription in respect to lac operon.
 - Describe the Western Blot technique.

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